

Walla Walla Bull Trout Population Assessment and Physical Habitat Suitability Study

The US Fish and Wildlife Service (USFWS), in partnership with Utah State University (Utah Cooperative Fish and Wildlife Research Unit, USGS Coop Unit) will conduct a bull trout population assessment and habitat use/suitability project in the Walla Walla Basin. The goal of this project is to acquire insight into the biology of bull trout and their physical habitat requirements. Bull trout population dynamics for the South Fork (SF) Walla Walla and the hydrology of the SF Walla Walla and main stem Walla Walla will be studied in order to guide recovery planning for this species under the Endangered Species Act and to aid in water management.

Results from this project will complement current work by the Oregon and Washington Departments of Fish and Wildlife, the Umatilla Indian Tribes, and the Walla Walla Basin Watershed Council. Future research may also include the North Fork and Mill Creek and possibly other areas of the Walla Walla main stem.

The bull trout population in the SF has exhibited a relatively good level of spawning abundance for the recent time period, and the information from this local population can be used to guide recovery activities for the entire Walla Walla basin and other areas in the Columbia Basin.

Biologists will use a mark/recapture technique, which involves capturing, marking, and releasing a fraction of the total number of fish in the SF Walla Walla with PIT-tags (electronic tag and detection system) and visual floy tags. The PIT tags enable biologists to understand the growth of the population and the survival of fish under different habitat conditions. This work will also give biologists bull trout population estimates to supplement yearly redd counts. This biological information will enable agencies in the Walla Walla Basin to act with the appropriate restoration efforts to maintain numbers and increase the survivability of bull trout in the basin.

The USFWS will also conduct extensive physical habitat surveys and hydraulic modeling, and develop habitat assessments for the main stem and SF Walla Walla. This work, in conjunction with the Walla Walla Basin Watershed Council will enable water resource planners, users, and local biologists to understand the dynamics of the flow regime for the SF Walla Walla.

Using 2-dimensional flow models, hydrologists can spatially quantify the physical characteristics of surface water flows. By linking habitat use data to the flow models, biologists can then predict how in-stream habitat needs are affected by different flow levels, and therefore help direct future habitat restoration efforts. Information gained regarding bull trout survival under different habitat types will be used to prioritize restoration work. The flow and habitat data, in combination with electro-shocking and snorkel data, will also be beneficial for ongoing steelhead and Chinook recovery efforts.

This project will begin the summer of 2002 and is projected to continue for approximately five years. For the first year, the bull trout population work will occur on US Forest Service Land on the SF Walla Walla. The flow modeling and hydrologic data collection will occur from the main stem Walla Walla at the Oregon/Washington state line up through the headwaters of the Umatilla National Forest. On going interaction with local agencies and managers will occur throughout the duration of this project.

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